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NEWS 1		Web Page for STN Seminar Schedule - N. America
NEWS 2	OCT 02	CA/CAplus enhanced with pre-1907 records from Chemisches Zentralblatt
NEWS 3	OCT 19	BEILSTEIN updated with new compounds
NEWS 4	NOV 15	Derwent Indian patent publication number format enhanced
NEWS 5	NOV 19	WPIX enhanced with XML display format
NEWS 6	NOV 30	ICSD reloaded with enhancements
NEWS 7	DEC 04	LINPADOCDB now available on STN
NEWS 8	DEC 14	BEILSTEIN pricing structure to change
NEWS 9	DEC 17	USPATOLD added to additional database clusters
NEWS 10	DEC 17	IMSDRUGCONF removed from database clusters and STN
NEWS 11	DEC 17	DGENE now includes more than 10 million sequences
NEWS 12	DEC 17	TOXCENTER enhanced with 2008 MeSH vocabulary in MEDLINE segment
NEWS 13	DEC 17	MEDLINE and LMEDLINE updated with 2008 MeSH vocabulary
NEWS 14	DEC 17	CA/CAplus enhanced with new custom IPC display formats
NEWS 15	DEC 17	STN Viewer enhanced with full-text patent content from USPATOLD
NEWS 16	JAN 02	STN pricing information for 2008 now available
NEWS 17	JAN 16	CAS patent coverage enhanced to include exemplified prophetic substances
NEWS 18	JAN 28	USPATFULL, USPAT2, and USPATOLD enhanced with new custom IPC display formats
NEWS 19	JAN 28	MARPAT searching enhanced
NEWS 20	JAN 28	USGENE now provides USPTO sequence data within 3 days of publication
NEWS 21	JAN 28	TOXCENTER enhanced with reloaded MEDLINE segment
NEWS 22	JAN 28	MEDLINE and LMEDLINE reloaded with enhancements
NEWS 23	FEB 08	STN Express, Version 8.3, now available
NEWS 24	FEB 20	PCI now available as a replacement to DPCI
NEWS 25	FEB 25	IFIREF reloaded with enhancements
NEWS 26	FEB 25	IMSPRODUCT reloaded with enhancements
NEWS 27	FEB 29	WPINDEX/WPIDS/WPIX enhanced with ECLA and current U.S. National Patent Classification

NEWS EXPRESS FEBRUARY 08 CURRENT WINDOWS VERSION IS V8.3,
AND CURRENT DISCOVER FILE IS DATED 20 FEBRUARY 2008

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NEWS LOGIN	Welcome Banner and News Items
NEWS IPC8	For general information regarding STN implementation of IPC 8

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=> s rotaxane (l) (complex or inclusion or host)
L1 898 ROTAXANE (L) (COMPLEX OR INCLUSION OR HOST)

=> dup rem
ENTER L# LIST OR (END):l1
PROCESSING COMPLETED FOR L1
L2 730 DUP REM L1 (168 DUPLICATES REMOVED)

=> s l2 and py<=2003
L3 430 L2 AND PY<=2003

=> s l3 and rotaxane (s) (complex or inclusion or host)
L4 331 L3 AND ROTAXANE (S) (COMPLEX OR INCLUSION OR HOST)

=> d scan l4

L4 331 ANSWERS CAPLUS COPYRIGHT 2008 ACS on STN
CC 22-3 (Physical Organic Chemistry)
Section cross-reference(s): 75
TI First Pseudorotaxane-Like [3]Complexes Based on Cryptands and Paraquat: Self-Assembly and Crystal Structures
ST pseudorotaxane inclusion complex cryptand paraquat base prepn crystallog
IT Formation constant
(association constant; preparation and crystallog. of pseudorotaxane-like complexes based on cryptands and paraquat)
IT Crystal structure
Encapsulation
Hydrogen bond
Molecular structure
Self-assembly
(preparation and crystallog. of pseudorotaxane-like complexes based on cryptands and paraquat)
IT Cryptands
RL: CPS (Chemical process); PEP (Physical, engineering or chemical

process); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)
(preparation and crystallog. of pseudorotaxane-like complexes based on cryptands and paraquat)
IT Inclusion compounds
RL: FMU (Formation, unclassified); PRP (Properties); FORM (Formation, nonpreparative)
(preparation and crystallog. of pseudorotaxane-like complexes based on cryptands and paraquat)
IT NMR (nuclear magnetic resonance)
(proton; preparation and crystallog. of pseudorotaxane-like complexes based on cryptands and paraquat)
IT Rotaxanes
RL: FMU (Formation, unclassified); PRP (Properties); FORM (Formation, nonpreparative)
(pseudorotaxanes; preparation and crystallog. of pseudorotaxane-like complexes based on cryptands and paraquat)
IT 591767-50-9P 591767-51-0P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(crystal structure; preparation and crystallog. of pseudorotaxane-like complexes based on cryptands and paraquat)
IT 64739-07-7 106376-99-2
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(preparation and crystallog. of pseudorotaxane-like complexes based on cryptands and paraquat)
IT 249925-32-4
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(preparation and crystallog. of pseudorotaxane-like complexes based on cryptands and paraquat)
IT 591767-47-4P
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)
(preparation and crystallog. of pseudorotaxane-like complexes based on cryptands and paraquat)
IT 591767-49-6
RL: FMU (Formation, unclassified); RCT (Reactant); FORM (Formation, nonpreparative); RACT (Reactant or reagent)
(preparation and crystallog. of pseudorotaxane-like complexes based on cryptands and paraquat)
IT 108-73-6, Phloroglucinol 4685-14-7, Paraquat
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation and crystallog. of pseudorotaxane-like complexes based on cryptands and paraquat)
IT 59291-87-1P, 5-Benzyloxyresorcinol 591767-46-3P 591767-48-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and crystallog. of pseudorotaxane-like complexes based on cryptands and paraquat)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):end

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ALL L# QUERIES AND ANSWER SETS ARE DELETED AT LOGOFF
LOGOFF? (Y)/N/HOLD:n

=> s rotaxane and (drug (s) delivery)
1 FILES SEARCHED...
L5 75 ROTAXANE AND (DRUG (S) DELIVERY)

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=> s 15 and py<=2003
L6          37 L5 AND PY<=2003

=> dup rem
ENTER L# LIST OR (END):16
PROCESSING COMPLETED FOR L6
L7           35 DUP REM L6 (2 DUPLICATES REMOVED)

=> d l7 ibib abs 1-35

L7   ANSWER 1 OF 35  CAPLUS  COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER:        2004:681395  CAPLUS
DOCUMENT NUMBER:         141:195314
TITLE:                   Multivalently interactive molecular assembly,
                         capturing agent, drug carrier, calcium chelating
                         agent, and drug enhancer
INVENTOR(S):             Yui, Nobuhiko; Maruyama, Atsushi; Ooya, Tooru
PATENT ASSIGNEE(S):      Japan
SOURCE:                  U.S. Pat. Appl. Publ., 47 pp., Cont.-in-part of U.S.
                         Pat. Appl. 2003 171,573.
                         CODEN: USXXCO
DOCUMENT TYPE:           Patent
LANGUAGE:                English
FAMILY ACC. NUM. COUNT:  2
PATENT INFORMATION:

     PATENT NO.          KIND   DATE        APPLICATION NO.         DATE
     ----------------    ----   --------    --------------------    --------
     US 2004162275        A1    20040819    US 2003-679499          20031007
     US 2003171573        A1    20030911    US 2002-230394          20020829 <--
PRIORITY APPLN. INFO.:                       JP 2002-52474       A   20020227
                                             US 2002-230394      B2  20020829
AB   A multivalently interactive mol. assembly having a plurality of functional
     groups or ligands, in which a ratio between Rh and Rg expressed as Rh/Rg
     is 1.0 or less.  Here, Rh is a hydrodynamic radius calculated from dynamic
     light scattering (DLS) assay performed in aqueous solution; and Rg is a radius
of
     gyration determined based on the Zimm plot generated using data obtained by
     static light scattering (SLS) assay.  A polyrotaxane was prepared from
     α-cyclodextrin and diamino-PEG and reacted with Z-L-Phe succinimide
     ester.  Then biotin mols. were introduced into the polyrotaxane mol.
     Examples were given of anal. of biotin-polyrotaxane conjugate binding to
     streptavidin-immobilized surface using surface plasmon resonance.  Trypsin
     activity inhibition and Ca chelating activities of polyrotaxanes were also
     given.

L7   ANSWER 2 OF 35  CAPLUS  COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER:        2003:5802  CAPLUS
DOCUMENT NUMBER:         138:66692
TITLE:                   Tissue-specific transporter inhibitor in treatment of
                         tissue dysfunction diseases and chronic renal failure
INVENTOR(S):             Tsuji, Akira; Tamai, Ikumi; Sai, Yoshimichi; Yui,
                         Noubuhiko; Oya, Toru; Miyamoto, Ken-ichi
PATENT ASSIGNEE(S):      Japan Science and Technology Corporation, Japan
SOURCE:                  PCT Int. Appl., 53 pp.
                         CODEN: PIXXD2
DOCUMENT TYPE:           Patent
LANGUAGE:                Japanese
FAMILY ACC. NUM. COUNT:  1
PATENT INFORMATION:
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PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003000285	A1	20030103	WO 2002-JP6104	20020619 <--
W: AU, CA, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
JP 2003002843	A	20030108	JP 2001-188843	20010621 <--
JP 3942846	B2	20070711		
CA 2451433	A1	20030103	CA 2002-2451433	20020619 <--
CA 2451433	C	20071030		
AU 2002313242	A1	20030108	AU 2002-313242	20020619 <--
EP 1405644	A1	20040407	EP 2002-738767	20020619
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
US 2004191211	A1	20040930	US 2003-742335	20031219
PRIORITY APPLN. INFO.:			JP 2001-188843 A	20010621
			WO 2002-JP6104 W	20020619

AB It is intended to provide a tissue-specific transporter inhibitor which is not absorbed in the digestive tract and can prevent worsening in the quality of life (QOL) of a patient due to diet therapy; and remedies for tissue dysfunction diseases and remedies for chronic renal failure progress containing the above inhibitor as the active ingredient. The tissue-specific transporter inhibitor not absorbed in the digestive tract is prepared by introducing a dipeptide which is a ligand of oligopeptide transporter 1 into a supermol. structure polyrotaxane which is expected as being excellent in the interaction of its structurally modified active residue with a transmembrane transporter.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 3 OF 35 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:717792 CAPLUS
DOCUMENT NUMBER: 139:224476
TITLE: Multivalently interactive molecular assembly, capturing agent, drug carrier, calcium chelating agent, and drug enhancer
INVENTOR(S): Yui, Nobuhiko; Maruyama, Atsushi; Ooya, Tooru
PATENT ASSIGNEE(S): Japan
SOURCE: U.S. Pat. Appl. Publ., 33 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003171573	A1	20030911	US 2002-230394	20020829 <--
JP 2004027183	A	20040129	JP 2003-51163	20030227
US 2004162275	A1	20040819	US 2003-679499	20031007
PRIORITY APPLN. INFO.:			JP 2002-52474 A	20020227
			US 2002-230394 A	20020829

AB The invention relates to a multivalently interactive mol. assembly which can effectively and stably bind to a target substance in vivo or in vitro, a capturing agent comprising said multivalently interactive mol. assembly for capturing an object of interest in vivo or in vitro, a drug carrier which aids administration of a drug, a calcium chelating agent which can effectively chelate calcium, and a drug enhancer which can be administered with a drug to assist in e.g. absorption of the drug. The invention discloses a multivalently interactive mol. assembly having a plurality of functional groups or ligands, in which a ratio between Rh and Rg expressed as Rh/Rg is 1.0 or less. Here, Rh is a hydrodynamic radius calculated from a

dynamic light scattering assay performed in aqueous solution, and Rg is a radius of gyration determined based on the Zimm plot generated using data obtained by a static light scattering assay. Specifically, the invention discloses polyrotaxanes, the synthesis of which is described.

L7 ANSWER 4 OF 35 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:558225 CAPLUS
DOCUMENT NUMBER: 140:117028
TITLE: Polyrotaxanes: challenge to multivalent binding with biological receptors on cell surfaces
AUTHOR(S): Yui, Nobuhiko; Ooya, Tooru
CORPORATE SOURCE: Japan Advanced Institute of Science and Technology, Tatsunokuchi, Ishikawa, 923-1292, Japan
SOURCE: Materials Science Forum (2003), 426-432(Pt. 4, THERMEC'2003), 3243-3248
CODEN: MSFOEP; ISSN: 0255-5476
PUBLISHER: Trans Tech Publications Ltd.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review. The challenge to multivalent binding between ligands and proteins or biol. receptors on cell surfaces has been focused on using supramol.-structured polymers, polyrotaxanes. Our designed polyrotaxanes consist of ligand-immobilized α-cyclodextrins (α-CDs) threaded onto a linear polymeric chain (polyethylene glycol) (PEG) capped both terminals with bulky end-groups via biodegradable linkages. Structural characteristics of these polyrotaxanes involve sliding and rotational motion of the ligands immobilized on α-CDs along a PEG chain as to easily face to binding sites on proteins, which can contribute much to enhanced multivalent binding with proteins.
REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 5 OF 35 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:489737 CAPLUS
DOCUMENT NUMBER: 140:47100
TITLE: Approach to multivalent biological interactions by using supermolecular biomaterials
AUTHOR(S): Yui, Nobuhiko
CORPORATE SOURCE: Japan Advanced Institute of Science and Technology, Japan
SOURCE: Gekkan Yakuji (2003), 45(7), 1269-1272
CODEN: YAKUD5; ISSN: 0016-5980
PUBLISHER: Jiho
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese
AB A review especially covering multivalent interaction of ligand-introduced α-cyclodextrin/polyethylene glycol-based polyrotaxanes with proteins for their application as biomaterials.

L7 ANSWER 6 OF 35 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:819708 CAPLUS
DOCUMENT NUMBER: 140:391507
TITLE: Rotaxane dendrimers
AUTHOR(S): Lee, Jae Wook; Kim, Kimoon
CORPORATE SOURCE: Department of Chemistry, Dong-A University, Pusan, 604-714, S. Korea
SOURCE: Topics in Current Chemistry (2003), 228(Dendrimers V), 111-140
CODEN: TPCCAQ; ISSN: 0340-1022
PUBLISHER: Springer-Verlag
DOCUMENT TYPE: Journal; General Review

LANGUAGE: English
AB A review. The synthesis, properties, and potential applications of rotaxane dendrimers, dendritic mols. containing rotaxane -like mech. bonds to link their components are described. Rotaxane dendrimers are classified into three types depending on where rotaxane-like features are introduced - Type I, II, and III rotaxane dendrimers which incorporate rotaxane -like features at the core, termini, and branches, resp. Several different types of macrocycles are employed as the ring component in the templated synthesis of rotaxane dendrimers. In the synthesis of rotaxane dendrimers, several aspects should be carefully considered, including the binding affinity of the macrocycle (ring) and guest (rod). The properties of these rotaxane dendrimers are quite different from those of the individual rotaxanes or dendrimers and often a blend of both. Potential applications of rotaxane dendrimers include mol. nanoreactors, drug delivery, and gene delivery.
REFERENCE COUNT: 69 THERE ARE 69 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 7 OF 35 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:449510 CAPLUS
DOCUMENT NUMBER: 137:24340
TITLE: Noble gas complexes
INVENTOR(S): Mason, Rodney Stewart; Moozyckine, Alexei Uriah; Dingley, John
PATENT ASSIGNEE(S): UWS Ventures Limited, UK
SOURCE: PCT Int. Appl., 23 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002045721	A1	20020613	WO 2001-GB5356	20011204 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002020881	A5	20020618	AU 2002-20881	20011204 <--
PRIORITY APPLN. INFO.:			GB 2000-29586	A 20001204
			GB 2001-9066	A 20010411
			WO 2001-GB5356	W 20011204

AB An infusion formulation for inducing and/or maintaining anesthesia includes a complex of a noble gas, i.e., krypton or xenon, and a mol. encapsulating agent. The encapsulating agent is a cyclodextrin, its derivative, a soluble polymer or a rotaxane. The formulation may also be used as an analgesic formulation or in a neuroprotective formulation.
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 8 OF 35 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:98608 CAPLUS
DOCUMENT NUMBER: 136:156401
TITLE: Polyrotaxanes containing ε-polylysine as

antibacterial agents, and manufacture of ε-polylysine therefrom

INVENTOR(S): Yui, Nobuhiko; Otani, Toru; Hiraki, Jun; Arakawa, Kenji

PATENT ASSIGNEE(S): Chisso Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002037884	A	20020206	JP 2000-226673	20000727 <--

PRIORITY APPLN. INFO.: JP 2000-226673 20000727

AB The invention provides a polyrotaxane containing ε-polylysine and α-cyclodextrin, suitable for use in a food or pharmaceutical product as an antibacterial agent. Also, method fo manufacturing purified ε-polylysine by using the polyrotaxane is also disclosed.

L7 ANSWER 9 OF 35 EMBASE COPYRIGHT (c) 2008 Elsevier B.V. All rights reserved on STN

ACCESSION NUMBER: 2003113589 EMBASE

TITLE: Controlled release from crosslinked degradable networks.

AUTHOR: Davis K.A.; Anseth K.S.

CORPORATE SOURCE: K.S. Anseth, Department of Chemical Engineering, University of Colorado-Boulder, Campus Box 424, Boulder, CO 80309, United States. kristi.anseth@colorado.edu

SOURCE: Critical Reviews in Therapeutic Drug Carrier Systems, (2002) Vol. 19, No. 4-5, pp. 385-423.
Refs: 133
ISSN: 0743-4863 CODEN: CRTSEO

COUNTRY: United States

DOCUMENT TYPE: Journal; General Review; (Review)

FILE SEGMENT: 037 Drug Literature Index
039 Pharmacy

LANGUAGE: English

SUMMARY LANGUAGE: English

ENTRY DATE: Entered STN: 27 Mar 2003
Last Updated on STN: 27 Mar 2003

AB This article reviews controlled release from crosslinked degradable networks. Network formulations include those derived from wholly synthetic components, natural components, and combinations thereof. This includes, but is not limited to, poly(orthoesters), poly(anhydrides), poly(ethylene glycol) (PEG) derivatives, and dextran functional macromonomers. In addition, we present a discussion of the chemistry behind novel degradable networks with potential use in the controlled release realm.

L7 ANSWER 10 OF 35 CAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 1

ACCESSION NUMBER: 2002:258831 CAPLUS

DOCUMENT NUMBER: 138:175631

TITLE: Multivalent interactions between biotin-polyrotaxane conjugates and streptavidin as a model of new targeting for transporters

AUTHOR(S): Ooya, Tooru; Yui, Nobuhiko

CORPORATE SOURCE: School of Materials Science, Japan Advanced Institute of Science and Technology, Tatsunokuchi, Ishikawa, 923-1292, Japan

SOURCE: Journal of Controlled Release (2002), 80(1-3), 219-228

CODEN: JCREEC; ISSN: 0168-3659
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Kinetic anal. of interactions between biotin-polyrotaxane or biotin-α-cyclodextrin (biotin-α-CD) conjugates and streptavidin was carried out as a model of new targeting to transporters using the surface plasmon resonance (SPR) technique. The biotin-polyrotaxane conjugates, in which biotin-introduced α-CDs are threaded onto a poly(ethylene oxide) chain capped with bulky end-groups, are expected to increase the valency of biotin from monovalent to multivalent binding. The number of biotins conjugated with one polyrotaxane mol. varied from 11 to 78, and apparently increased the association equilibrium constant (Ka), assuming pseudo-first-order kinetics. A detailed dissociation kinetics was analyzed and the re-binding of the biotin-polyrotaxane conjugates was observed on the streptavidin-deposited SPR surface. The magnitude of the re-binding is likely to become larger with increasing the number of biotins, suggesting multivalent interaction on the SPR surface. To quantify the effect of valency, competitive inhibition assay was performed in terms of the supramol. structure of the polyrotaxane. The inhibitory potency of the biotin-polyrotaxane conjugate was found to be 4-5 times greater than that of the biotin-α-CD conjugate. Therefore, the biotin-polyrotaxane conjugates by supramol. formation of the biotin-α-CD conjugate significantly switches from monovalent to multivalent bindings to the model binding protein, streptavidin.
REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 11 OF 35 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:175158 CAPLUS
DOCUMENT NUMBER: 136:205279
TITLE: Biomaterials design in nano-scale sciences
AUTHOR(S): Yui, Nobuhiko
CORPORATE SOURCE: Sch. Mater. Sci., Japan Adv. Inst. Sci. Technol., Ishikawa, 923-1292, Japan
SOURCE: Fragrance Journal (2002), 30(1), 56-60
CODEN: FUJAD7; ISSN: 0288-9803
PUBLISHER: Fureguransu Janaru Sha
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese
AB A review on design of functional materials with supramol. structure for biomedical and pharmaceutical application, discussing design of mech. interlocked mol. assemblies such as polyrotaxanes and its application to drug delivery system, and design of biodegradable polyrotaxane hydrogels for tissue engineering.

L7 ANSWER 12 OF 35 CAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 2
ACCESSION NUMBER: 2002:628383 CAPLUS
DOCUMENT NUMBER: 138:406712
TITLE: Carboxyethyl ester-polyrotaxanes as a new calcium chelating polymer: synthesis, calcium binding and mechanism of trypsin inhibition
AUTHOR(S): Ooya, Tooru; Eguchi, Masaru; Ozaki, Atsushi; Yui, Nobuhiko
CORPORATE SOURCE: School of Materials Science, Japan Advanced Institute of Science and Technology, Tatsunokuchi, Ishikawa, 923-1292, Japan
SOURCE: International Journal of Pharmaceutics (2002), 242(1-2), 47-54
CODEN: IJPHDE; ISSN: 0378-5173
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal

LANGUAGE: English
AB A carboxyethylester-polyrotaxane was synthesized as a novel calcium chelating polymer in the field of oral drug delivery and characterized in terms of mechanism of trypsin inhibition. Here, carboxyethyl ester (CEE) groups are introduced to all the primary hydroxyl groups in α-cyclodextrins (α-CDs), which are threaded onto a poly(ethylene glycol) chain capped with bulky end-groups (polyrotaxane). The solubility of the CEE-polyrotaxane in physiol. conditions increased with pH, indicating ionization-related solubility similar to conventional polyacrylates. The ability of calcium (Ca2+) chelation was found to increase in the order of poly(acrylic acid) (PAA)>CEE-polyrotaxane»CEE-α-CD, suggesting that the increased d. of carboxyl groups enhances the Ca2+ chelating ability. The activity of trypsin was inhibited by these compds. in the same order of the calcium chelation. However, the inhibitory effect of CEE-polyrotaxane was reduced by adding excess Ca2+ without precipitation that was observed in the presence of PAA.
Such the reduced inhibition and precipitation by CEE-α-CD was not observed Therefore, the inhibitory effect of CEE-polyrotaxane is due to Ca2+ chelation from trypsin without non-specific interaction.
REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 13 OF 35 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:691806 CAPLUS
DOCUMENT NUMBER: 138:343544
TITLE: Supramolecular design aiming at intelligent DDS
AUTHOR(S): Yui, Nobuhiko
CORPORATE SOURCE: Japan
SOURCE: Kino Zairyo (2002), 22(8), 28-34
CODEN: KIZAEP; ISSN: 0286-4835
PUBLISHER: Shi Emu Shi Shuppan
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese
AB A review on intelligent drug delivery system (DDS). Topics discussed are design of biomaterial containing polyrotaxane, multivalent interaction between the polyrotaxane and cell membrane receptors, design of hydrogel containing inclusion complex of α-cyclodextrin with poly(ε-lysine) and biodegradable polyrotaxane hydrogel, and supermol. design of nano-scale biomaterial for DDS.

L7 ANSWER 14 OF 35 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:553147 CAPLUS
DOCUMENT NUMBER: 135:362419
TITLE: Polyrotaxanes with molecular recognition functions
AUTHOR(S): Ooya, Tooru
CORPORATE SOURCE: Graduate School of Material Science, Hokuriku Advanced Science and Technology University, Japan
SOURCE: Kobunshi (2001), 50(7), 456
CODEN: KOBUA3; ISSN: 0454-1138
PUBLISHER: Kobunshi Gakkai
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese
AB A review with refs. A review with 19 refs., on construction and structures of polyrotaxanes with mol. recognition functions for use in drug delivery system.

L7 ANSWER 15 OF 35 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:346895 CAPLUS
DOCUMENT NUMBER: 138:78277
TITLE: Controllable erosion time and profile in poly(ethylene

glycol) hydrogels by supramolecular structure of hydrolyzable polyrotaxane
AUTHOR(S): Ichi, T.; Lee, W. K.; Ooya, T.; Yui, N.
CORPORATE SOURCE: School of Materials Science, Japan Advanced Institute of Science and Technology, Ishikawa, 923-1292, Japan
SOURCE: Proceedings - 28th International Symposium on Controlled Release of Bioactive Materials and 4th Consumer & Diversified Products Conference, San Diego, CA, United States, June 23-27, 2001 (2001), Volume 1, 365-366. Controlled Release Society: Minneapolis, Minn.
CODEN: 69CNY8
DOCUMENT TYPE: Conference
LANGUAGE: English
AB The hydrolytic erosion behaviors of poly(ethylene glycol) (PEG) hydrogels crosslinked by a hydrolyzable polyrotaxane were characterized. The erosion time and profile of these hydrogels were controllable and these hydrogels showed the enhanced stability of hydrolysis with highly water swollen state.
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 16 OF 35 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:670733 CAPLUS
DOCUMENT NUMBER: 136:345631
TITLE: Synthesis of polyrotaxane-biotin conjugates and surface plasmon resonance analysis of streptavidin recognition
AUTHOR(S): Ooya, Tooru; Kawashima, Tomokatsu; Yui, Nobuhiko
CORPORATE SOURCE: School of Materials Science, Japan Advanced Institute of Science and Technology, Ishikawa, 923-1292, Japan
SOURCE: Biotechnology and Bioprocess Engineering (2001), 6(4), 293-300
CODEN: BBEIAU; ISSN: 1226-8372
PUBLISHER: Korean Society for Biotechnology and Bioengineering
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A polyrotaxane-biotin conjugate was synthesized and its interaction with streptavidin measured using surface plasmon resonance (SPR) detection. A biodegradable polyrotaxane in which .apprx.22 mols. of α-cyclodextrins (α-CDs) were threaded onto a poly(ethylene oxide) chain (Mn: 4,000) capped with benzyloxycarbonyl-L-phenylalanine was conjugated with a biotin hydrazide and 2-aminoethanol after activating the hydroxyl groups of α-CDs in the polyrotaxane using N,N'-carbonyldiimidazole. The results of the high-resolution 1H-NMR (1H-NMR) spectra and gel permeation chromatog. of the conjugate showed that .apprx.11 biotin mols. were actually introduced to the polyrotaxane scaffold. An SPR anal. showed that the binding curves of the biotin mols. in the conjugate on the streptavidin-deposited surface changed in a concentration dependent manner, indicating that the biotin in the conjugate was actually recognized by streptavidin. The association equilibrium constant (Ka) of the interaction between the conjugate and streptavidin tetramer was of the order 107. These results suggest that polyrotaxane is useful for scaffolds as a polymeric ligand in biomedical fields.
REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 17 OF 35 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:825190 CAPLUS
DOCUMENT NUMBER: 137:98696
TITLE: Biodegradable polyrotaxanes aiming at biomedical and

pharmaceutical applications
AUTHOR(S): Ooya, Tooru; Yui, Nobuhiko
CORPORATE SOURCE: Japan Advanced Institute of Science and Technology, School of Materials Science, Ishikawa, 923-1292, Japan
SOURCE: Biomedical Polymers and Polymer Therapeutics, [Proceedings of the International Symposium on Frontiers in Biomedical Polymers Including Polymer Therapeutics: From Laboratory to Clinical Practice], 3rd, Biwa Lake, Japan, May 23-27, 1999 (2001), Meeting Date 1999, 75-90. Editor(s): Chiellini, Emo. Kluwer Academic/Plenum Publishers: New York, N. Y.
CODEN: 69BZMR
DOCUMENT TYPE: Conference; General Review
LANGUAGE: English
AB A review on the design of biodegradable polyrotaxanes as a novel candidate for drug carriers as well as implantable materials for tissue engineering. Poly(ethylene glycol) and α-cyclodextrin were used as main components of the polyrotaxane. The supramol. structure and dissociation of the polyrotaxanes will be the most unique characteristics when considering biomedical and pharmaceutical applications.
REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 18 OF 35 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:704221 CAPLUS
DOCUMENT NUMBER: 136:406652
TITLE: Bio-material design aiming at polyrotaxane structure
AUTHOR(S): Yui, Nobuhiko; Ooya, Tooru
CORPORATE SOURCE: Graduate School of material Science, Japan Advanced Institute of Science and Technology, Japan
SOURCE: Mirai Zairyo (2001), 1(3), 26-32
CODEN: MZIABA
PUBLISHER: Enu-Ti-Esu
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese
AB A review. This article reviews the potential of polyrotaxane in drug delivery system and tissue engineering with the description of their unique structure properties.

L7 ANSWER 19 OF 35 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2000:846509 CAPLUS
DOCUMENT NUMBER: 134:183381
TITLE: Synthesis and characterization of an oligopeptide-terminated polyrotaxane as a drug carrier
AUTHOR(S): Ooya, Tooru; Arizono, Koichi; Yui, Nobuhiko
CORPORATE SOURCE: School of Materials Science, Japan Advanced Institute of Science and Technology, Ishikawa, 923-1292, Japan
SOURCE: Polymers for Advanced Technologies (2000), 11(8-12), 642-651
CODEN: PADTE5; ISSN: 1042-7147
PUBLISHER: John Wiley & Sons Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A polyrotaxane consisting of α-cyclodextrins (α-CDs) and α,ω-di(glycylglycyne) polyoxyethylene (α,ω-di(Gly-Gly)-PEG) capped with tyrosine was synthesized as a drug carrier and its in vitro degradation by aminopeptidase M was demonstrated. α,ω-Di(Gly-Gly)-PEG was prepared by condensation reaction between terminal amino-groups in α-(3-aminopropyl)-ω-(3-aminopropyl) polyoxyethylene and succinimide ester of N-tert-butyloxycarbonyl (Boc)-Gly-Gly, followed by the deprotection of Boc group via acidic hydrolysis. A polypseudorotaxane consisting of α-CDs and

α,ω-di(Gly-Gly)-PEG was prepared in the mixture of water and dimethylsulfoxide. The polyrotaxane was successfully synthesized by condensation reaction between the amino-groups in the pseudopolyrotaxane and p-nitrophenyl ester of carbobenzoxy L-tyrosine. The addition of 1-hydroxy-1H-benzotriazole on the reaction was found to increase the yield and the number of α-CDs in the polyrotaxane. Hydroxypropylation of the polyrotaxane improved the solubility in aqueous solns. and many kinds of organic solvents. In vitro degradation of the hydroxypropylated (HP-)polyrotaxane revealed that HP-α-CDs in the HP-polyrotaxane were released in the presence of aminopeptidase M. These results suggest that the supramol. dissociation will be triggered by the action of extra-cellular enzymes and lead to a new mechanism of drug release from polymeric drug carriers.

REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 20 OF 35 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:341389 CAPLUS
DOCUMENT NUMBER: 133:139965
TITLE: Supramolecular-structured polymers for drug delivery
AUTHOR(S): Ooya, Tooru; Yui, Nobuhiko
CORPORATE SOURCE: School of Materials Science, Japan Advanced Institute of Science and Technology, Ishikawa, 923-1292, Japan
SOURCE: ACS Symposium Series (2000), 752(Controlled Drug Delivery), 375-384
CODEN: ACSMC8; ISSN: 0097-6156
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB A review, with 25 refs. Polyrotaxanes as a supramol.-structured polymer were characterized aiming at a drug carrier, a drug permeation enhancer, an implantable material, and a stimuli-responsive material. Biodegradable polyrotaxanes exhibit their supramol. architectures: many α-cyclodextrins (α-CDs) are threaded onto a single poly(ethylene glycol) (PEG) chain capped with biodegradable bulky end-groups. Further, a stimuli-responsive polyrotaxane, in which many β-CDs are threaded onto a triblock-copolymer of PEG and poly(propylene glycol) (PPG) capped with fluorescein-4-isothiocyanate, was designed as a novel smart material.

REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 21 OF 35 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:331609 CAPLUS
TITLE: Peptide rotaxanes as potential drug delivery systems.
AUTHOR(S): Leigh, David A.; van Meurs, Sandra; Slater, Martin J.; Murphy, Aden
CORPORATE SOURCE: Centre for Supramolecular and Macromolecular Chemistry, University of Warwick, Coventry, CV4 7AL, UK
SOURCE: Book of Abstracts, 219th ACS National Meeting, San Francisco, CA, March 26-30, 2000 (2000), MEDI-008. American Chemical Society: Washington, D. C.
CODEN: 69CLAC
DOCUMENT TYPE: Conference; Meeting Abstract
LANGUAGE: English

AB The discovery of a simple hydrogen bonding template for rotaxane formation has led to investigations into the potential of using rotaxanes of biol. active peptides as novel drug

delivery systems. Here we describe how rotaxane formation imparts enzyme stability upon the peptide and how manipulation of the solubility and transport properties can be achieved through functionalisation of the rotaxane macrocycle.

L7 ANSWER 22 OF 35 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
ACCESSION NUMBER: 2000:222509 BIOSIS
DOCUMENT NUMBER: PREV200000222509
TITLE: Peptide rotaxanes as potential drug delivery systems.
AUTHOR(S): Leigh, David A. [Reprint author]; van Meurs, Sandra [Reprint author]; Slater, Martin J.; Murphy, Aden [Reprint author]
CORPORATE SOURCE: Centre for Supramolecular and Macromolecular Chemistry, Department of Chemistry, University of Warwick, Gibbet Hill Road, Coventry, CV4 7AL, UK
SOURCE: Abstracts of Papers American Chemical Society, (2000) Vol. 219, No. 1-2, pp. MEDI 8. print.
Meeting Info.: 219th Meeting of the American Chemical Society. San Francisco, California, USA. March 26-30, 2000. American Chemical Society.
CODEN: ACSRAL. ISSN: 0065-7727.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 31 May 2000
Last Updated on STN: 5 Jan 2002

L7 ANSWER 23 OF 35 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:453602 CAPLUS
DOCUMENT NUMBER: 132:69125
TITLE: Polyrotaxanes: synthesis, structure, and potential in drug delivery
AUTHOR(S): Ooya, Tooru; Yui, Nobuhiko
CORPORATE SOURCE: School of Materials Science, Japan Advanced Institute of Science and Technology, Ishikawa, 923-1292, Japan
SOURCE: Critical Reviews in Therapeutic Drug Carrier Systems (1999), 16(3), 289-330
CODEN: CRTSEO; ISSN: 0743-4863
PUBLISHER: Begell House, Inc.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB This article reviews with 91 refs. the potential of polyrotaxanes in drug delivery with the historical background of polyrotaxane syntheses. Pseudopolyrotaxanes and polyrotaxanes, including classifications, synthetic methods, structures and phys. properties are discussed in the first section. The second section provides our concept of drug carriers using drug-polyrotaxane conjugates in comparison with conventional drug-polymer conjugates. The third and fourth sections describe the synthetic method for biodegradable polyrotaxanes, the conjugation with drugs, and their association under physiol. conditions. The fifth section discusses other possibilities for the polyrotaxanes such as drug penetration enhancers. These studies suggest the potential of polyrotaxanes in pharmaceutical applications.
REFERENCE COUNT: 91 THERE ARE 91 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 24 OF 35 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:653460 CAPLUS
DOCUMENT NUMBER: 132:141754
TITLE: Biodegradable polyrotaxanes as a drug carrier

AUTHOR(S): Ooya, T.; Yui, N.
CORPORATE SOURCE: School of Materials Science, Japan Advanced Institute of Science and Technology, Ishikawa, 923-1292, Japan
SOURCE: S.T.P. Pharma Sciences (1999), 9(1), 129-138
CODEN: STSSE5; ISSN: 1157-1489
PUBLISHER: Editions de Sante
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with 51 refs. This article reviews our concept of drug delivery systems using drug/polyrotaxane conjugates as drug carriers. The biodegradable polyrotaxanes exhibit their supramol. architectures: many α-cyclodextrins are threaded onto a single poly(ethylene glycol) chain capped with biodegradable bulky end-groups. The synthetic method of the polyrotaxanes, the conjugation with drugs, and their association nature in a physiol. condition are described. The supramol. dissociation of the drug/polyrotaxane conjugates via terminal peptide cleavage by a hydrolytic enzyme is discussed in relation to their association nature. Through these studies, advantages of drug/polyrotaxane conjugates as drug carriers are suggested in comparison with conventional drug/polymer conjugates.
REFERENCE COUNT: 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 25 OF 35 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:539755 CAPLUS
TITLE: Peptido[2]rotaxanes with oligosaccharide stoppers: A model system for controlled peptide drug delivery.
AUTHOR(S): Leigh, David A.; Nepogodiev, Sergey A.
CORPORATE SOURCE: Department of Chemistry, University of Warwick, Coventry, CV4 7AL, UK
SOURCE: Book of Abstracts, 218th ACS National Meeting, New Orleans, Aug. 22-26 (1999), CARB-022.
American Chemical Society: Washington, D. C.
CODEN: 67ZJA5
DOCUMENT TYPE: Conference; Meeting Abstract
LANGUAGE: English
AB For efficient application as drugs, potent oligopeptides must overcome a number of phys. and enzymic barriers presented. Amongst these are the susceptibility of peptides to the action of hydrolytic enzymes and their poor membrane transport properties. Temporary encapsulation of peptides by a macrocycle in the form of [2]rotaxanes is proposed as a possible solution to these problems. For application as a drug delivery systems one of the stoppers attached to the end of oligopeptide thread should be degradable under physiol. conditions allowing the 'slippage' of the macrocycle. We investigated the application of oligosaccharides as biodegradable stoppers for [2] rotaxanes based on GlyGly. [2]Rotaxanes 1 and 2a were prepared through the 'clipping' strategy. After deprotection of the sugar portions of these compds. only rotaxane 2b was stable. The disassembling of 2b can be achieved through the action of a-mannosidases.

L7 ANSWER 26 OF 35 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
ACCESSION NUMBER: 1999:412609 BIOSIS
DOCUMENT NUMBER: PREV199900412609
TITLE: Peptido(2)rotaxanes with oligosaccharide stoppers: A model system for controlled peptide drug delivery.
AUTHOR(S): Leigh, David A. [Reprint author]; Nepogodiev, Sergey A. [Reprint author]
CORPORATE SOURCE: Department of Chemistry, University of Warwick, Coventry,

CV4 7AL, UK
SOURCE: Abstracts of Papers American Chemical Society, (1999) Vol. 218, No. 1-2, pp. CARB 22. print. Meeting Info.: 218th National Meeting of the American Chemical Society, Parts 1 and 2. New Orleans, Louisiana, USA. August 22-26, 1999. American Chemical Society. CODEN: ACSRAL. ISSN: 0065-7727.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 8 Oct 1999
Last Updated on STN: 8 Oct 1999

L7 ANSWER 27 OF 35 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1998:666077 CAPLUS
DOCUMENT NUMBER: 129:331307
TITLE: Supramolecular dissociation of biodegradable polyrotaxanes by enzymic terminal hydrolysis
AUTHOR(S): Ooya, Tooru; Yui, Nobuhiko
CORPORATE SOURCE: School Materials Sci., Japan Advanced Inst. Sci. Technol., Ishikawa, 923, Japan
SOURCE: Macromolecular Chemistry and Physics (1998), 199(10), 2311-2320
CODEN: MCHPES; ISSN: 1022-1352
PUBLISHER: Huethig & Wepf Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Supramol. dissociation of biodegradable polyrotaxanes via terminal hydrolysis by an enzyme (papain) in vitro was investigated in relation to their solution properties. The polyrotaxanes were synthesized by the introduction of L-phenylalanine (L-Phe) at both ends of an inclusion complex consisting of α-cyclodextrins (α-CDs) and amino-terminated poly(ethylene glycol) (PEG) via peptide linkages, followed by the hydroxypropylation of α-CDs. From static and dynamic light scattering studies, it was clarified that the polyrotaxanes form a loosely packed association but L-Phe-terminated PEGs form a tightly packed association Further, the polyrotaxanes were found to maintain their rod-like structures in physiol. conditions. In vitro degradation expts. using papain revealed that the terminal hydrolysis of the polyrotaxanes is completed and accompanied by the release of hydroxypropylated α-CDs, and this behavior is not affected by the association number of the polyrotaxanes. On the other hand, the terminal hydrolysis of L-Phe-terminated PEG is limited under similar conditions. From these results, the complete dissociation of the polyrotaxanes by hydrolysis is considered to be due to the loosely packed association, presumably related to the rod-like structure. The potential for drug delivery is discussed.

L7 ANSWER 28 OF 35 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1997:664215 CAPLUS
DOCUMENT NUMBER: 127:351269
TITLE: Transdermal absorption accelerators and their preparation
INVENTOR(S): Yui, Nobuhiko
PATENT ASSIGNEE(S): Yui, Nobuhiko, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09263547	A	19971007	JP 1996-76491	19960329 <--
JP 3704194	B2	20051005		

PRIORITY APPLN. INFO.: JP 1996-76491 19960329

AB The title accelerators comprise several hydroxypropylated α-, β-, or γ-cyclodextrin mols. whose cavities are occupied by biodegradable group-terminated linear macromols., and are prepared by (A) treatment of Z-L-Phe with N-hydroxysuccinimide (N-HOSu), (B) addition of α,ω-di(3-aminopropyl)-polyoxyethylene to an aqueous cyclodextrin solution, (C) addition of the resulting pseudopolyrotaxane to a solution of Z-L-Phe-OSu obtained in the process A, (D) hydroxypropylation of the resulting Z-L-Phe-polyrotaxane, and optional (E) deprotection of the Z group by reduction The accelerators cause no cytotoxicity, skin irritation, or inflammation. Hydroxypropylated Z-L-Phe-polyrotaxane significantly enhanced transdermal absorption of indomethacin in isolated rat skin.

L7 ANSWER 29 OF 35 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1997:664211 CAPLUS
DOCUMENT NUMBER: 127:351268
TITLE: Indomethacin topical preparations containing biodegradable polymer assembly having supramolecular structure
INVENTOR(S): Yui, Nobuhiko
PATENT ASSIGNEE(S): Toko Yakuhin Kogyo K. k., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09263535	A	19971007	JP 1996-76490	19960329 <--
JP 3830198	B2	20061004		

PRIORITY APPLN. INFO.: JP 1996-76490 19960329

AB The topical preparation contains indomethacin (I) and a biodegradable polymer assembly having a supramol. structure which comprises a number of α-, β-, or γ-cyclodextrin, a linear polymer penetrating through the hollows of the cyclodextrins, and biodegradable moieties bonded to both ends of the polymer. The unique polymer assembly improves transdermal absorption of drugs without causing skin irritation and toxicity. A saturated α-cyclodextrin solution was treated with PEG 4000BA [α-(3-aminopropyl)-ω-(3-aminopropoxy)poly(oxyethylene)] and the resulting turbid solution was ultrasonicated then let stand overnight to give a pseudopolyrotaxane comprising 35-40 cyclodextrin mols. and a threading polyoxyethylene chain. The pseudopolyrotaxane was treated with a DMS solution of Z-L-Phe-Su, prepared from carbobenzoxy-L-phenylalanine and N-hydroxysuccinimide, to give Z-L-Phe-polyrotaxane. This was hydroxypropylated with propylene oxide, followed by deprotection of carbobenzoxy group. Permeation of I through a sheet of hairless mouse skin pretreated with the hydroxypropylated polyrotaxane was 19.27 μg/cm3 for 8 h, vs. 9.10 μg/cm3 for a control using H2O as pretreatment agent.

L7 ANSWER 30 OF 35 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1997:463672 CAPLUS
DOCUMENT NUMBER: 127:126414
TITLE: Peptide-biodegradable polyrotaxane conjugate as a peptide delivery system
AUTHOR(S): Ooya, Tooru; Yui, Nobuhiko

CORPORATE SOURCE: Japan Advanced Institute of Science and Technology, Tatsunokuchi, 923-12, Japan
SOURCE: Proceedings of the International Symposium on Controlled Release of Bioactive Materials (1997), 24th, 459-460
CODEN: PCRMEY; ISSN: 1022-0178
PUBLISHER: Controlled Release Society, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A peptide conjugate with supramol. assembly was prepared, and physicochem. stability was evaluated. The conjugate has supramol. structure and 2 amino groups of insulin were modified. Further, conformational change of insulin was prevented by the modification. It is suggested that his supramol. conjugate is feasible as a peptide drug carrier.

L7 ANSWER 31 OF 35 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1997:339997 CAPLUS
DOCUMENT NUMBER: 127:70694
TITLE: Synthesis and characterization of biodegradable polyrotaxane as a novel supramolecular-structured drug carrier
AUTHOR(S): Ooya, Tooru; Yui, Nobuhiko
CORPORATE SOURCE: School of Materials Science, Japan Advanced Institute of Science and Technology, Tatsunokuchi, Ishikawa, 923-12, Japan
SOURCE: Journal of Biomaterials Science, Polymer Edition (1997), 8(6), 437-455
CODEN: JBSEEA; ISSN: 0920-5063
PUBLISHER: VSP
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Polyrotaxanes were synthesized as novel biodegradable polymers with supramol. assembly and their properties evaluated in vitro. The synthesis of biodegradable polyrotaxanes consists of three steps: preparation of an inclusion complex consisting of α-cyclodextrins (α-CDs) and amino-terminated poly(ethylene glycol) (PEG); introduction of L-phenylalanine (L-Phe) at each complex terminal via peptide linkages; and hydroxypropylation of α-CDs in the polyrotaxanes. Succinimide ester of benzyloxycarbonyl-L-Phe was condensed with the terminal amino groups of the inclusion complex. 1H-NMR and GPC results showed that α-CDs were threaded onto a PEG chain and L-Phe moieties were introduced at each terminal of the PEG chain. Further, the amount of threaded α-CDs was found to be governed by the mol. weight of PEG. The hydroxypropylation of α-CDs improved the solubility of the polyrotaxanes in PBS (pH 7.4). The hydroxypropylated (HP-) polyrotaxanes were characterized by terminal peptide cleavage using papain. In vitro degradation of HP-polyrotaxanes revealed that HP-α-CDs threaded onto a PEG chain were released only when terminal peptide linkages were cleaved. Moreover, threaded HP-α-CDs chain were released only when terminal peptide linkages were cleaved. Moreover, threaded HP-α-CDs onto a PEG chain was found to be completely released. Kinetics of terminal peptide cleavage were also evaluated by catalytic efficiency (kcat/Km). The kcat/Km values were found to be independent of the mol. weight of HP-polyrotaxanes but to be affected by terminal hydrophobic moieties. It is proposed that our designed polyrotaxanes are feasible as novel drug carriers.
REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 32 OF 35 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1997:117230 CAPLUS
DOCUMENT NUMBER: 126:229499
TITLE: Interaction of supramolecular assembly with hairless

rat stratum corneum
AUTHOR(S): Kamimura, Wataru; Ooya, Tooru; Yui, Nobuhiko
CORPORATE SOURCE: Sch. Mater. Sci., Japan Ad. Inst. Sci. Technol., Ishikawa, 923-12, Japan
SOURCE: Journal of Controlled Release (1997), 44(2,3), 295-299
CODEN: JCREEC; ISSN: 0168-3659
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Polyrotaxanes are well known as a supramol. assembly in which many cyclic compds. are threaded onto a linear polymeric chain capped with bulky end-groups. In this paper, a polyrotaxane consisting of α-CDs and PEG capped with biodegradable peptide moieties was synthesized, and the interaction with stratum corneum of hairless rat skin was examined by means of a differential scanning calorimetry. The hydroxypropylated polyrotaxane was found to interact with lipid components in the stratum corneum: bound water content was significantly decreased although ordered lipid bilayers were maintained. Thus, it is suggested that our designed polyrotaxane can be feasible as novel candidates for transdermal penetration enhancers.

L7 ANSWER 33 OF 35 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1996:377201 CAPLUS
DOCUMENT NUMBER: 125:41804
TITLE: Biodegradable medicinal polymer assembly with supermolecular structure
INVENTOR(S): Yui, Nobuhiko
PATENT ASSIGNEE(S): Japan
SOURCE: PCT Int. Appl., 15 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9609073	A1	19960328	WO 1995-JP909	19950512 <--
W: AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, IS, KG, KR, KZ, LK, LR, LT, LV, MD, MG, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TT, UA, UG, US, UZ, VN				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
JP 08092130	A	19960409	JP 1994-254872	19940924 <--
JP 3699141	B2	20050928		
CA 2176383	A1	19960328	CA 1995-2176383	19950512 <--
AU 9524199	A	19960409	AU 1995-24199	19950512 <--
EP 730869	A1	19960911	EP 1995-918178	19950512 <--
EP 730869	B1	20010627		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
CN 1135720	A	19961113	CN 1995-190936	19950512 <--
AT 202486	T	20010715	AT 1995-918178	19950512 <--
US 5855900	A	19990105	US 1996-637733	19960426 <--

PRIORITY APPLN. INFO.: JP 1994-254872 A 19940924
WO 1995-JP909 W 19950512

AB The invention relates to a highly water-soluble polymer having arbitrarily controllable drug-carrying capacity and drug-releasing characteristics and serving as a novel drug carrier widely applicable in vivo; and a biodegradable medicinal polymer assembly having a supermol. structure and being capable of releasing a drug in response to a specific biodegrdn.

occurring in each disease. The assembly comprises a number of drug-carrying cyclic compds. prepared by binding a drug to α, β or γ-cyclodextrin, a linear polymer penetrating through the hollows of the cyclic compds., and biodegradable moieties bonded to both ends of the polymer. A biodegradable medicinal polymer assembly with supermol. structure for mitomycin C delivery is given as an example.

L7 ANSWER 34 OF 35 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1996:489035 CAPLUS
DOCUMENT NUMBER: 125:177188
TITLE: Novel design of supramolecular-structured biodegradable polymer for drug delivery
AUTHOR(S): Yui, Nobuhiko; Ooya, Tooru
CORPORATE SOURCE: Sch. Materials Science, JAIST, Ishikawa, 923-12, Japan
SOURCE: Advanced Biomaterials in Biomedical Engineering and Drug Delivery Systems, [Iketani Conference on Biomedical Polymers], 5th, Kagoshima, Japan, Apr. 18-22, 1995 (1996), Meeting Date 1995, 333-334. Editor(s): Ogata, Naoya. Springer: Tokyo, Japan.
CODEN: 63CXA6
DOCUMENT TYPE: Conference
LANGUAGE: English
AB Biodegradable polymers with supramol. structures were proposed as a novel candidate of substrates for temporal drug delivery. A biodegradable polyrotaxane was synthesized in which α-cyclodextrins (α-CDs) as drug carriers were threaded onto a poly(ethylene glycol) (PEG) chain capped at each terminal with L-phenylalanine (L-Phe) via peptide linkages. The release of α-CDs from the biodegradable polyrotaxane was observed only when the terminal peptide linkages were hydrolyzed by papain. Further, the dethreading process of α-CDs from PEG chains was also observed to be quite rapid. Therefore, it is suggested that α-CD release from the biodegradable polyrotaxane was controlled by the hydrolysis of terminal peptide linkages.

L7 ANSWER 35 OF 35 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1996:267862 CAPLUS
DOCUMENT NUMBER: 125:41536
TITLE: Biodegradable polyrotaxanes for drug delivery
AUTHOR(S): Yui, Nobuhiko
CORPORATE SOURCE: Grad, Sch., Hokuniku Univ., Japan
SOURCE: Kobunshi (1996), 45(4), 263
CODEN: KOBUA3; ISSN: 0454-1138
PUBLISHER: Kobunshi Gakkai
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese
AB A review with 5 refs. discussing biodegradable polyrotaxanes for use in drug delivery systems.

=> s l7 and (targeted or antibody)
L8 0 L7 AND (TARGETED OR ANTIBODY)

=>
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                                                       ENTRY    SESSION
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=> s ?rotaxane
L9         3154 ?ROTAXANE

=> s l9 (l) drug and target
L10           1 L9 (L) DRUG AND TARGET

=> d l10

L10  ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2008 ACS on STN
AN   2003:717792  CAPLUS
DN   139:224476
TI   Multivalently interactive molecular assembly, capturing agent, drug
     carrier, calcium chelating agent, and drug enhancer
IN   Yui, Nobuhiko; Maruyama, Atsushi; Ooya, Tooru
PA   Japan
SO   U.S. Pat. Appl. Publ., 33 pp.
     CODEN: USXXCO
DT   Patent
LA   English
FAN.CNT 2
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     --------------      ----   --------    -------------------    --------
PI   US 2003171573       A1     20030911    US 2002-230394         20020829
     JP 2004027183       A      20040129    JP 2003-51163          20030227
     US 2004162275       A1     20040819    US 2003-679499         20031007
PRAI JP 2002-52474       A      20020227
     US 2002-230394      A      20020829


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DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                      ENTRY    SESSION
CA SUBSCRIBER PRICE                                  -25.60     -25.60

=> s rotaxane (s) drug
L11          34 ROTAXANE (S) DRUG

=> dup rem
ENTER L# LIST OR (END):l11
PROCESSING COMPLETED FOR L11
L12           34 DUP REM L11 (0 DUPLICATES REMOVED)

=> s l12 and py<=2003
L13          20 L12 AND PY<=2003

=> d l13 ibib abs 1-20

L13  ANSWER 1 OF 20  CAPLUS  COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER:         2004:681395  CAPLUS
DOCUMENT NUMBER:          141:195314
TITLE:                    Multivalently interactive molecular assembly,
                          capturing agent, drug carrier, calcium chelating
                          agent, and drug enhancer
INVENTOR(S):              Yui, Nobuhiko; Maruyama, Atsushi; Ooya, Tooru
PATENT ASSIGNEE(S):       Japan
SOURCE:                   U.S. Pat. Appl. Publ., 47 pp., Cont.-in-part of U.S.
                          Pat. Appl. 2003 171,573.
                          CODEN: USXXCO
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   2
PATENT INFORMATION:

     PATENT NO.          KIND   DATE        APPLICATION NO.         DATE
     --------------      ----   --------    --------------------    --------
     US 2004162275        A1    20040819    US 2003-679499          20031007
     US 2003171573        A1    20030911    US 2002-230394          20020829 <--
PRIORITY APPLN. INFO.:                       JP 2002-52474       A   20020227
                                             US 2002-230394      B2  20020829
AB   A multivalently interactive mol. assembly having a plurality of functional
     groups or ligands, in which a ratio between Rh and Rg expressed as Rh/Rg
     is 1.0 or less.  Here, Rh is a hydrodynamic radius calculated from dynamic
     light scattering (DLS) assay performed in aqueous solution; and Rg is a radius
of
     gyration determined based on the Zimm plot generated using data obtained by
     static light scattering (SLS) assay.  A polyrotaxane was prepared from
     α-cyclodextrin and diamino-PEG and reacted with Z-L-Phe succinimide
     ester.  Then biotin mols. were introduced into the polyrotaxane mol.
```

Examples were given of anal. of biotin-polyrotaxane conjugate binding to streptavidin-immobilized surface using surface plasmon resonance. Trypsin activity inhibition and Ca chelating activities of polyrotaxanes were also given.

L13 ANSWER 2 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:819708 CAPLUS
DOCUMENT NUMBER: 140:391507
TITLE: Rotaxane dendrimers
AUTHOR(S): Lee, Jae Wook; Kim, Kimoon
CORPORATE SOURCE: Department of Chemistry, Dong-A University, Pusan, 604-714, S. Korea
SOURCE: Topics in Current Chemistry (2003), 228(Dendrimers V), 111-140
CODEN: TPCCAQ; ISSN: 0340-1022
PUBLISHER: Springer-Verlag
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review. The synthesis, properties, and potential applications of rotaxane dendrimers, dendritic mols. containing rotaxane-like mech. bonds to link their components are described. Rotaxane dendrimers are classified into three types depending on where rotaxane-like features are introduced - Type I, II, and III rotaxane dendrimers which incorporate rotaxane-like features at the core, termini, and branches, resp. Several different types of macrocycles are employed as the ring component in the templated synthesis of rotaxane dendrimers. In the synthesis of rotaxane dendrimers, several aspects should be carefully considered, including the binding affinity of the macrocycle (ring) and guest (rod). The properties of these rotaxane dendrimers are quite different from those of the individual rotaxanes or dendrimers and often a blend of both. Potential applications of rotaxane dendrimers include mol. nanoreactors, drug delivery, and gene delivery.
REFERENCE COUNT: 69 THERE ARE 69 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 3 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:717792 CAPLUS
DOCUMENT NUMBER: 139:224476
TITLE: Multivalently interactive molecular assembly, capturing agent, drug carrier, calcium chelating agent, and drug enhancer
INVENTOR(S): Yui, Nobuhiko; Maruyama, Atsushi; Ooya, Tooru
PATENT ASSIGNEE(S): Japan
SOURCE: U.S. Pat. Appl. Publ., 33 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003171573	A1	20030911	US 2002-230394	20020829 <--
JP 2004027183	A	20040129	JP 2003-51163	20030227
US 2004162275	A1	20040819	US 2003-679499	20031007
PRIORITY APPLN. INFO.:			JP 2002-52474 A	20020227
			US 2002-230394 A	20020829

AB The invention relates to a multivalently interactive mol. assembly which can effectively and stably bind to a target substance in vivo or in vitro, a capturing agent comprising said multivalently interactive mol. assembly for capturing an object of interest in vivo or in vitro, a drug carrier which aids administration of a drug, a calcium chelating agent which can

effectively chelate calcium, and a drug enhancer which can be administered with a drug to assist in e.g. absorption of the drug. The invention discloses a multivalently interactive mol. assembly having a plurality of functional groups or ligands, in which a ratio between Rh and Rg expressed as Rh/Rg is 1.0 or less. Here, Rh is a hydrodynamic radius calculated from a dynamic light scattering assay performed in aqueous solution, and Rg is a radius of gyration determined based on the Zimm plot generated using data obtained by a static light scattering assay. Specifically, the invention discloses polyrotaxanes, the synthesis of which is described.

L13 ANSWER 4 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:691806 CAPLUS
DOCUMENT NUMBER: 138:343544
TITLE: Supramolecular design aiming at intelligent DDS
AUTHOR(S): Yui, Nobuhiko
CORPORATE SOURCE: Japan
SOURCE: Kino Zairyo (2002), 22(8), 28-34
CODEN: KIZAEP; ISSN: 0286-4835
PUBLISHER: Shi Emu Shi Shuppan
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese
AB A review on intelligent drug delivery system (DDS). Topics discussed are design of biomaterial containing polyrotaxane, multivalent interaction between the polyrotaxane and cell membrane receptors, design of hydrogel containing inclusion complex of α-cyclodextrin with poly(ε-lysine) and biodegradable polyrotaxane hydrogel, and supermol. design of nano-scale biomaterial for DDS.

L13 ANSWER 5 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:553147 CAPLUS
DOCUMENT NUMBER: 135:362419
TITLE: Polyrotaxanes with molecular recognition functions
AUTHOR(S): Ooya, Tooru
CORPORATE SOURCE: Graduate School of Material Science, Hokuriku Advanced Science and Technology University, Japan
SOURCE: Kobunshi (2001), 50(7), 456
CODEN: KOBUA3; ISSN: 0454-1138
PUBLISHER: Kobunshi Gakkai
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese
AB A review with refs. A review with 19 refs., on construction and structures of polyrotaxanes with mol. recognition functions for use in drug delivery system.

L13 ANSWER 6 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2000:846509 CAPLUS
DOCUMENT NUMBER: 134:183381
TITLE: Synthesis and characterization of an oligopeptide-terminated polyrotaxane as a drug carrier
AUTHOR(S): Ooya, Tooru; Arizono, Koichi; Yui, Nobuhiko
CORPORATE SOURCE: School of Materials Science, Japan Advanced Institute of Science and Technology, Ishikawa, 923-1292, Japan
SOURCE: Polymers for Advanced Technologies (2000), 11(8-12), 642-651
CODEN: PADTE5; ISSN: 1042-7147
PUBLISHER: John Wiley & Sons Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A polyrotaxane consisting of α-cyclodextrins (α-CDs) and α,ω-di(glycylglycyne) polyoxyethylene (α,ω-di(Gly-Gly)-PEG) capped with tyrosine was synthesized as a drug carrier and its

in vitro degradation by aminopeptidase M was demonstrated. α,ω-Di(Gly-Gly)-PEG was prepared by condensation reaction between terminal amino-groups in α-(3-aminopropyl)-ω-(3-aminopropyl) polyoxyethylene and succinimide ester of N-tert-butyloxycarbonyl (Boc)-Gly-Gly, followed by the deprotection of Boc group via acidic hydrolysis. A polypseudorotaxane consisting of α-CDs and α,ω-di(Gly-Gly)-PEG was prepared in the mixture of water and dimethylsulfoxide. The polyrotaxane was successfully synthesized by condensation reaction between the amino-groups in the pseudopolyrotaxane and p-nitrophenyl ester of carbobenzoxy L-tyrosine. The addition of 1-hydroxy-1H-benzotriazole on the reaction was found to increase the yield and the number of α-CDs in the polyrotaxane. Hydroxypropylation of the polyrotaxane improved the solubility in aqueous solns. and many kinds of organic solvents. In vitro degradation of the hydroxypropylated (HP-)polyrotaxane revealed that HP-α-CDs in the HP-polyrotaxane were released in the presence of aminopeptidase M. These results suggest that the supramol. dissociation will be triggered by the action of extra-cellular enzymes and lead to a new mechanism of drug release from polymeric drug carriers.

REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 7 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:341389 CAPLUS
DOCUMENT NUMBER: 133:139965
TITLE: Supramolecular-structured polymers for drug delivery
AUTHOR(S): Ooya, Tooru; Yui, Nobuhiko
CORPORATE SOURCE: School of Materials Science, Japan Advanced Institute of Science and Technology, Ishikawa, 923-1292, Japan
SOURCE: ACS Symposium Series (2000), 752(Controlled Drug Delivery), 375-384
CODEN: ACSMC8; ISSN: 0097-6156
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB A review, with 25 refs. Polyrotaxanes as a supramol.-structured polymer were characterized aiming at a drug carrier, a drug permeation enhancer, an implantable material, and a stimuli-responsive material. Biodegradable polyrotaxanes exhibit their supramol. architectures: many α-cyclodextrins (α-CDs) are threaded onto a single poly(ethylene glycol) (PEG) chain capped with biodegradable bulky end-groups. Further, a stimuli-responsive polyrotaxane, in which many β-CDs are threaded onto a triblock-copolymer of PEG and poly(propylene glycol) (PPG) capped with fluorescein-4-isothiocyanate, was designed as a novel smart material.

REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 8 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:331609 CAPLUS
TITLE: Peptide rotaxanes as potential drug delivery systems.
AUTHOR(S): Leigh, David A.; van Meurs, Sandra; Slater, Martin J.; Murphy, Aden
CORPORATE SOURCE: Centre for Supramolecular and Macromolecular Chemistry, University of Warwick, Coventry, CV4 7AL, UK
SOURCE: Book of Abstracts, 219th ACS National Meeting, San Francisco, CA, March 26-30, 2000 (2000), MEDI-008. American Chemical Society: Washington, D. C.
CODEN: 69CLAC

DOCUMENT TYPE: Conference; Meeting Abstract
LANGUAGE: English
AB The discovery of a simple hydrogen bonding template for rotaxane formation has led to investigations into the potential of using rotaxanes of biol. active peptides as novel drug delivery systems. Here we describe how rotaxane formation imparts enzyme stability upon the peptide and how manipulation of the solubility and transport properties can be achieved through functionalisation of the rotaxane macrocycle.

L13 ANSWER 9 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:653460 CAPLUS
DOCUMENT NUMBER: 132:141754
TITLE: Biodegradable polyrotaxanes as a drug carrier
AUTHOR(S): Ooya, T.; Yui, N.
CORPORATE SOURCE: School of Materials Science, Japan Advanced Institute of Science and Technology, Ishikawa, 923-1292, Japan
SOURCE: S.T.P. Pharma Sciences (1999), 9(1), 129-138
CODEN: STSSE5; ISSN: 1157-1489
PUBLISHER: Editions de Sante
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with 51 refs. This article reviews our concept of drug delivery systems using drug/polyrotaxane conjugates as drug carriers. The biodegradable polyrotaxanes exhibit their supramol. architectures: many α-cyclodextrins are threaded onto a single poly(ethylene glycol) chain capped with biodegradable bulky end-groups. The synthetic method of the polyrotaxanes, the conjugation with drugs, and their association nature in a physiol. condition are described. The supramol. dissociation of the drug/polyrotaxane conjugates via terminal peptide cleavage by a hydrolytic enzyme is discussed in relation to their association nature. Through these studies, advantages of drug/polyrotaxane conjugates as drug carriers are suggested in comparison with conventional drug/polymer conjugates.
REFERENCE COUNT: 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 10 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:539755 CAPLUS
TITLE: Peptido[2]rotaxanes with oligosaccharide stoppers: A model system for controlled peptide drug delivery.
AUTHOR(S): Leigh, David A.; Nepogodiev, Sergey A.
CORPORATE SOURCE: Department of Chemistry, University of Warwick, Coventry, CV4 7AL, UK
SOURCE: Book of Abstracts, 218th ACS National Meeting, New Orleans, Aug. 22-26 (1999), CARB-022. American Chemical Society: Washington, D. C.
CODEN: 67ZJA5
DOCUMENT TYPE: Conference; Meeting Abstract
LANGUAGE: English
AB For efficient application as drugs, potent oligopeptides must overcome a number of phys. and enzymic barriers presented. Amongst these are the susceptibility of peptides to the action of hydrolytic enzymes and their poor membrane transport properties. Temporary encapsulation of peptides by a macrocycle in the form of [2]rotaxanes is proposed as a possible solution to these problems. For application as a drug delivery systems one of the stoppers attached to the end of oligopeptide thread should be degradable under physiol. conditions allowing the 'slippage' of the macrocycle. We investigated the application of oligosaccharides as biodegradable stoppers for [2]rotaxanes based on GlyGly. [2]Rotaxanes 1 and 2a were prepared through the 'clipping' strategy. After deprotection of the sugar portions of these compds. only rotaxane 2b was stable. The

disassembling of 2b can be achieved through the action of a-mannosidases.

L13 ANSWER 11 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:453602 CAPLUS
DOCUMENT NUMBER: 132:69125
TITLE: Polyrotaxanes: synthesis, structure, and potential in drug delivery
AUTHOR(S): Ooya, Tooru; Yui, Nobuhiko
CORPORATE SOURCE: School of Materials Science, Japan Advanced Institute of Science and Technology, Ishikawa, 923-1292, Japan
SOURCE: Critical Reviews in Therapeutic Drug Carrier Systems (1999), 16(3), 289-330
CODEN: CRTSEO; ISSN: 0743-4863
PUBLISHER: Begell House, Inc.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB This article reviews with 91 refs. the potential of polyrotaxanes in drug delivery with the historical background of polyrotaxane syntheses. Pseudopolyrotaxanes and polyrotaxanes, including classifications, synthetic methods, structures and phys. properties are discussed in the first section. The second section provides our concept of drug carriers using drug-polyrotaxane conjugates in comparison with conventional drug-polymer conjugates. The third and fourth sections describe the synthetic method for biodegradable polyrotaxanes, the conjugation with drugs, and their association under physiol. conditions. The fifth section discusses other possibilities for the polyrotaxanes such as drug penetration enhancers. These studies suggest the potential of polyrotaxanes in pharmaceutical applications.
REFERENCE COUNT: 91 THERE ARE 91 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 12 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:206406 CAPLUS
DOCUMENT NUMBER: 131:78242
TITLE: Synthesis of theophylline-polyrotaxane conjugates and their drug release via supramolecular dissociation
AUTHOR(S): Ooya, Tooru; Yui, Nobuhiko
CORPORATE SOURCE: School of Materials Science, Japan Advanced Institute of Science and Technology, Tatsunokuchi, Ishikawa, 923-1292, Japan
SOURCE: Journal of Controlled Release (1999), 58(3), 251-269
CODEN: JCREEC; ISSN: 0168-3659
PUBLISHER: Elsevier Science Ireland Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Theophylline-polyrotaxane conjugates were synthesized by coupling theophylline with α-cyclodextrins (α-CDs) in the polyrotaxane. The polyrotaxane is a mol. assembly in which many α-CDs are threaded onto a poly(ethylene glycol) (PEG) chain capped with L-phenylalanine (L-Phe). Theophylline-7-acetic acid was activated by coupling with 4-nitrophenol, and then ethylenediamine was allowed to react with the active ester in order to obtain N-aminoethyltheophylline-7-acetoamide. This derivative was coupled with a 4-nitrophenyl chloroformate-activated polyrotaxane to obtain the theophylline-polyrotaxane conjugates. The conjugates formed a specific association under physiol. conditions, depending upon interactions between the theophylline mols. and/or the terminal L-Phe moiety in the conjugates. In vitro degradation of the conjugates revealed that theophylline-immobilized α-CDs were completely released by hydrolysis of the terminal peptide linkage in the polyrotaxane. This result indicates that the association of the conjugates does not induce the steric hindrance but rather enhances the accessibility of enzymes to the

terminal peptide linkages. It is suggested that our designed drug-polyrotaxane conjugates can release the drugs via the dissociation of the supramol. structure without steric hindrance of enzymic accessibility to the terminal peptide linkages.

REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 13 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1998:482084 CAPLUS
DOCUMENT NUMBER: 129:265277
TITLE: New approach to drug targeting using a drug-polyrotaxane conjugate
AUTHOR(S): Ooya, Tooru; Yui, Nobuhiko
CORPORATE SOURCE: Japan Advanced Institute of Science and Technology, Ishikawa, 923-1292, Japan
SOURCE: Proceedings of the International Symposium on Controlled Release of Bioactive Materials (1998), 25th, 860-861
CODEN: PCRMEY; ISSN: 1022-0178
PUBLISHER: Controlled Release Society, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A novel supramol.-structured drug conjugate using a polyrotaxane was prepared In vitro degradation of the conjugate revealed that theophylline-modified α-cyclodextrin were released by terminal hydrolysis of the polyrotaxane. The drug release via supramol. dissoln. can feasibly be used for dual drug targeting.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 14 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1998:406136 CAPLUS
DOCUMENT NUMBER: 129:78839
TITLE: Method for the formation of non-aggregating fluorescent conjugates by producing stable rotaxane-like inclusion complexes to be used in UV spectroscopy, fluorescence microscopy and flow cytometry
INVENTOR(S): Aspe, Daniel
PATENT ASSIGNEE(S): Cis Bio International, Fr.; Aspe, Daniel
SOURCE: PCT Int. Appl., 37 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9826287	A1	19980618	WO 1997-FR2288	19971212 <--
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
FR 2757162	A1	19980619	FR 1996-15261	19961212 <--
FR 2757162	B1	19990326		
CA 2272890	A1	19980618	CA 1997-2272890	19971212 <--
CA 2272890	C	20041130		

AU 9854894	A	19980703	AU 1998-54894	19971212	<--
EP 946870	A1	19991006	EP 1997-951325	19971212	<--
EP 946870	B1	20021127			
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI					
JP 2001506002	T	20010508	JP 1998-526322	19971212	<--
JP 3955638	B2	20070808			
AT 228656	T	20021215	AT 1997-951325	19971212	<--
ES 2187834	T3	20030616	ES 1997-951325	19971212	<--
US 6120987	A	20000919	US 1998-9547l	19980610	<--

PRIORITY APPLN. INFO.: FR 1996-15261 A 19961212
WO 1997-FR2288 W 19971212

AB The invention concerns a method for obtaining a fluorescent conjugate between a binding mol. having at least an amino, hydroxy, carboxy and/or sulfydryl group and a fluorophore reagent having at least a functional group capable of reacting with said amino, hydroxy, carboxy and/or sulfydryl group(s), in the presence of an aqueous solution of a water-soluble macrocycle. The binding mol. conjugates to the fluorophore and in the presence of the macrocycle a stable rotaxane-like inclusion complex is formed; thus the aggregation of the fluorescent conjugates is prevented. The macrocycle is a cyclodextrin, a cyclodextrin derivative, or a calixarene. Reactive fluorophores are e.g. cyanine dyes, fluorescein etc. The binding mols. can be antibodies, antigens, proteins, avidin, haptens, toxins, hormones , drugs, polymers, glass, polysaccharides, nucleic acids etc. The invention also concerns the conjugates obtained by this method and their use.

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 15 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1997:339997 CAPLUS
DOCUMENT NUMBER: 127:70694
TITLE: Synthesis and characterization of biodegradable polyrotaxane as a novel supramolecular-structured drug carrier
AUTHOR(S): Ooya, Tooru; Yui, Nobuhiko
CORPORATE SOURCE: School of Materials Science, Japan Advanced Institute of Science and Technology, Tatsunokuchi, Ishikawa, 923-12, Japan
SOURCE: Journal of Biomaterials Science, Polymer Edition (1997), 8(6), 437-455
CODEN: JBSEEA; ISSN: 0920-5063
PUBLISHER: VSP
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Polyrotaxanes were synthesized as novel biodegradable polymers with supramol. assembly and their properties evaluated in vitro. The synthesis of biodegradable polyrotaxanes consists of three steps: preparation of an inclusion complex consisting of α-cyclodextrins (α-CDs) and amino-terminated poly(ethylene glycol) (PEG); introduction of L-phenylalanine (L-Phe) at each complex terminal via peptide linkages; and hydroxypropylation of α-CDs in the polyrotaxanes. Succinimide ester of benzyloxycarbonyl-L-Phe was condensed with the terminal amino groups of the inclusion complex. 1H-NMR and GPC results showed that α-CDs were threaded onto a PEG chain and L-Phe moieties were introduced at each terminal of the PEG chain. Further, the amount of threaded α-CDs was found to be governed by the mol. weight of PEG. The hydroxypropylation of α-CDs improved the solubility of the polyrotaxanes in PBS (pH 7.4). The hydroxypropylated (HP-) polyrotaxanes were characterized by terminal peptide cleavage using papain. In vitro degradation of HP-polyrotaxanes revealed that HP-α-CDs threaded onto a PEG chain were released only when terminal peptide linkages were cleaved. Moreover, threaded

HP-α-CDs chain were released only when terminal peptide linkages were cleaved. Moreover, threaded HP-α-CDs onto a PEG chain was found to be completely released. Kinetics of terminal peptide cleavage were also evaluated by catalytic efficiency (kcat/Km). The kcat/Km values were found to be independent of the mol. weight of HP-polyrotaxanes but to be affected by terminal hydrophobic moieties. It is proposed that our designed polyrotaxanes are feasible as novel drug carriers.

REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 16 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1996:489035 CAPLUS
DOCUMENT NUMBER: 125:177188
TITLE: Novel design of supramolecular-structured biodegradable polymer for drug delivery
AUTHOR(S): Yui, Nobuhiko; Ooya, Tooru
CORPORATE SOURCE: Sch. Materials Science, JAIST, Ishikawa, 923-12, Japan
SOURCE: Advanced Biomaterials in Biomedical Engineering and Drug Delivery Systems, [Iketani Conference on Biomedical Polymers], 5th, Kagoshima, Japan, Apr. 18-22, 1995 (1996), Meeting Date 1995, 333-334. Editor(s): Ogata, Naoya. Springer: Tokyo, Japan.
CODEN: 63CXA6
DOCUMENT TYPE: Conference
LANGUAGE: English

AB Biodegradable polymers with supramol. structures were proposed as a novel candidate of substrates for temporal drug delivery. A biodegradable polyrotaxane was synthesized in which α-cyclodextrins (α-CDs) as drug carriers were threaded onto a poly(ethylene glycol) (PEG) chain capped at each terminal with L-phenylalanine (L-Phe) via peptide linkages. The release of α-CDs from the biodegradable polyrotaxane was observed only when the terminal peptide linkages were hydrolyzed by papain. Further, the dethreading process of α-CDs from PEG chains was also observed to be quite rapid. Therefore, it is suggested that α-CD release from the biodegradable polyrotaxane was controlled by the hydrolysis of terminal peptide linkages.

L13 ANSWER 17 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1996:377201 CAPLUS
DOCUMENT NUMBER: 125:41804
TITLE: Biodegradable medicinal polymer assembly with supermolecular structure
INVENTOR(S): Yui, Nobuhiko
PATENT ASSIGNEE(S): Japan
SOURCE: PCT Int. Appl., 15 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9609073	A1	19960328	WO 1995-JP909	19950512 <--
W: AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, IS, KG, KR, KZ, LK, LR, LT, LV, MD, MG, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TT, UA, UG, US, UZ, VN				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
JP 08092130	A	19960409	JP 1994-254872	19940924 <--

JP 3699141	B2	20050928		
CA 2176383	A1	19960328	CA 1995-2176383	19950512 <--
AU 9524199	A	19960409	AU 1995-24199	19950512 <--
EP 730869	A1	19960911	EP 1995-918178	19950512 <--
EP 730869	B1	20010627		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
CN 1135720	A	19961113	CN 1995-190936	19950512 <--
AT 202486	T	20010715	AT 1995-918178	19950512 <--
US 5855900	A	19990105	US 1996-637733	19960426 <--
PRIORITY APPLN. INFO.:			JP 1994-254872	A 19940924
			WO 1995-JP909	W 19950512

AB The invention relates to a highly water-soluble polymer having arbitrarily controllable drug-carrying capacity and drug-releasing characteristics and serving as a novel drug carrier widely applicable in vivo; and a biodegradable medicinal polymer assembly having a supermol. structure and being capable of releasing a drug in response to a specific biodegrdn. occurring in each disease. The assembly comprises a number of drug-carrying cyclic compds. prepared by binding a drug to α, β or γ-cyclodextrin, a linear polymer penetrating through the hollows of the cyclic compds., and biodegradable moieties bonded to both ends of the polymer. A biodegradable medicinal polymer assembly with supermol. structure for mitomycin C delivery is given as an example.

L13 ANSWER 18 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER:	1996:267862 CAPLUS
DOCUMENT NUMBER:	125:41536
TITLE:	Biodegradable polyrotaxanes for drug delivery
AUTHOR(S):	Yui, Nobuhiko
CORPORATE SOURCE:	Grad, Sch., Hokuniku Univ., Japan
SOURCE:	Kobunshi (1996), 45(4), 263 CODEN: KOBUA3; ISSN: 0454-1138
PUBLISHER:	Kobunshi Gakkai
DOCUMENT TYPE:	Journal; General Review
LANGUAGE:	Japanese

AB A review with 5 refs. discussing biodegradable polyrotaxanes for use in drug delivery systems.

L13 ANSWER 19 OF 20 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

ACCESSION NUMBER:	2000:222509 BIOSIS
DOCUMENT NUMBER:	PREV200000222509
TITLE:	Peptide rotaxanes as potential drug delivery systems.
AUTHOR(S):	Leigh, David A. [Reprint author]; van Meurs, Sandra [Reprint author]; Slater, Martin J.; Murphy, Aden [Reprint author]
CORPORATE SOURCE:	Centre for Supramolecular and Macromolecular Chemistry, Department of Chemistry, University of Warwick, Gibbet Hill Road, Coventry, CV4 7AL, UK
SOURCE:	Abstracts of Papers American Chemical Society, (2000) Vol. 219, No. 1-2, pp. MEDI 8. print. Meeting Info.: 219th Meeting of the American Chemical Society. San Francisco, California, USA. March 26-30, 2000. American Chemical Society. CODEN: ACSRAL. ISSN: 0065-7727.
DOCUMENT TYPE:	Conference; (Meeting) Conference; Abstract; (Meeting Abstract)
LANGUAGE:	English
ENTRY DATE:	Entered STN: 31 May 2000 Last Updated on STN: 5 Jan 2002

L13 ANSWER 20 OF 20 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on

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ACCESSION NUMBER:	1999:412609 BIOSIS
DOCUMENT NUMBER:	PREV199900412609
TITLE:	Peptido(2)rotaxanes with oligosaccharide stoppers: A model system for controlled peptide drug delivery.
AUTHOR(S):	Leigh, David A. [Reprint author]; Nepogodiev, Sergey A. [Reprint author]
CORPORATE SOURCE:	Department of Chemistry, University of Warwick, Coventry, CV4 7AL, UK
SOURCE:	Abstracts of Papers American Chemical Society, (1999) Vol. 218, No. 1-2, pp. CARB 22. print. Meeting Info.: 218th National Meeting of the American Chemical Society, Parts 1 and 2. New Orleans, Louisiana, USA. August 22-26, 1999. American Chemical Society. CODEN: ACSRAL. ISSN: 0065-7727.
DOCUMENT TYPE:	Conference; (Meeting) Conference; Abstract; (Meeting Abstract)
LANGUAGE:	English
ENTRY DATE:	Entered STN: 8 Oct 1999 Last Updated on STN: 8 Oct 1999

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